PROBLEM ANALYSIS
OLD GROWTH AND UNGULATES
OF
NORTHERN VANCOUVER ISLAND

A DISCUSSION PAPER

MINISTRY OF FORESTS
MINISTRY OF ENVIRONMENT

April 15, 1982

Province of British Columbia

"Traditional timber harvest patterns on northern Vancouver Island have reduced the areas of old growth to the extent that deer and elk populations will be severely affected in a critical winter." Demand for both timber and wildlife "cannot be met to the degree that the proponents of each resource would prefer, and some reduction in wildlife recreation or timber harvesting is essential."

These statements are included in the introduction to a one-year program, aimed at identifying various production levels of both timber and wildlife on northern Vancouver Island and released today from the ministries of Forests and Environment. The program proposal establishes terms of reference for the analysis and gives a comprehensive background to the difficult resource decisions which must soon be made between timber and wildlife on northern Vancouver Island. The procedure by which both resources will be analyzed and the various management options determined is detailed, and a schedule for analysis and presentation of results is given.

Overall direction of the analysis is the responsibility of Bill Young, Chief Forester, Ministry of Forests and Allan Murray, Assistant Deputy Minister, Ministry of Environment, to whom the report will be submitted by December 15, 1982 for transmittal to the Environment and Land Use Committee.

"We feel that our respective staffs can adequately describe the biological and economic aspects of the interactions between timber and wildlife, but we earnestly require input from the public and the industry on the social factors involved in the trade-offs that may be necessary " said Chief Forester Bill Young. "We urge the interested public to review our proposal, and give us their ideas and opinions on both our problem outline and the issue itself."

Copies of the package which include the Terms of Reference and a Problem Analysis may be obtained from the Nanaimo Fish and Wildlife Branch, Ministry of Environment, the Campbell River and Vancouver offices of the Ministry of Forests and the Information Services Branch, Ministry of Forests, Victoria, B.C.

Comments on the proposal are requested by May 15th.

April 15, 1982

Through their joint press release of February 18, 1982 the Ministries of Environment and Forests committed themselves to defining management objectives for timber, deer and elk in TFLs 37 and 39 on Vancouver Island. The Working Committee has prepared a discussion paper outlining the problem as well as a schedule for completing the project by the end of 1982. The joint Working Committee will evaluate the supply and demand for timber and ungulates, determine the interactions between the two and prescribe management options for presentation to government.

The attached Terms of Reference and Problem Analysis outline the objectives, design and schedule of the exercise. In order to achieve the stated objectives, public and industry input is essential. Comments on any aspect of the proposed program can be sent to Strategic Studies Branch, Ministry of Forests, Parliament Buildings, Victoria, by May 15, 1982.

Ministry of Forests

Ministry of Environment

Problem Analysis
Old Growth and Ungulates on Northern Vancouver Island

INTRODUCTION

Ten years of research by universities, the Ministry of Environment, the forest industry and the Ministry of Forests has shown the need for old growth timber as critical winter range for Blacktail deer. A similar relationship is indicated for Roosevelt elk, although the data is less extensive for this species. In severe winters, the old growth canopy provides shelter and food which second growth timber does not. These stands occur at lower elevations on the more productive sites for timber.

Northern Vancouver Island supports a well-developed forest industry and many communities depend on this industry. The industry has relied on old growth timber contained in historic forest tenures to maintain the rate of timber harvest, employment and the general viability of the industry. Traditional timber harvest patterns on northern Vancouver Island have reduced the areas of old growth to the extent that deer and elk populations will be severely affected in a critical winter.

There is a need to critically examine the potential for reallocation of part of the remaining old growth timber, in the light of the perceived needs of industry and the recreational public. Clearly, both levels of demand cannot be met to the degree that proponents of each resource would prefer, and some reduction in wildlife recreation or timber harvesting is essential.

OBJECTIVES

There is a clear need to examine the existing data on both timber supply and wildlife production in northern Vancouver Island to determine what levels of each resource can be sustained. A Working Committee, consisting of representatives of the ministries of Forests and Environment, has been given the task of analyzing the current situation and recommending various resource options by the end of 1982. To this end, the objectives of this present

Problem Analysis are:

1. to define the interactions between ungulate production and timber harvesting in Tree Farm Licences 37 and 39 on northern Vancouver Island.

2. to divide the overall problem into component questions that can be individually assessed with existing data.

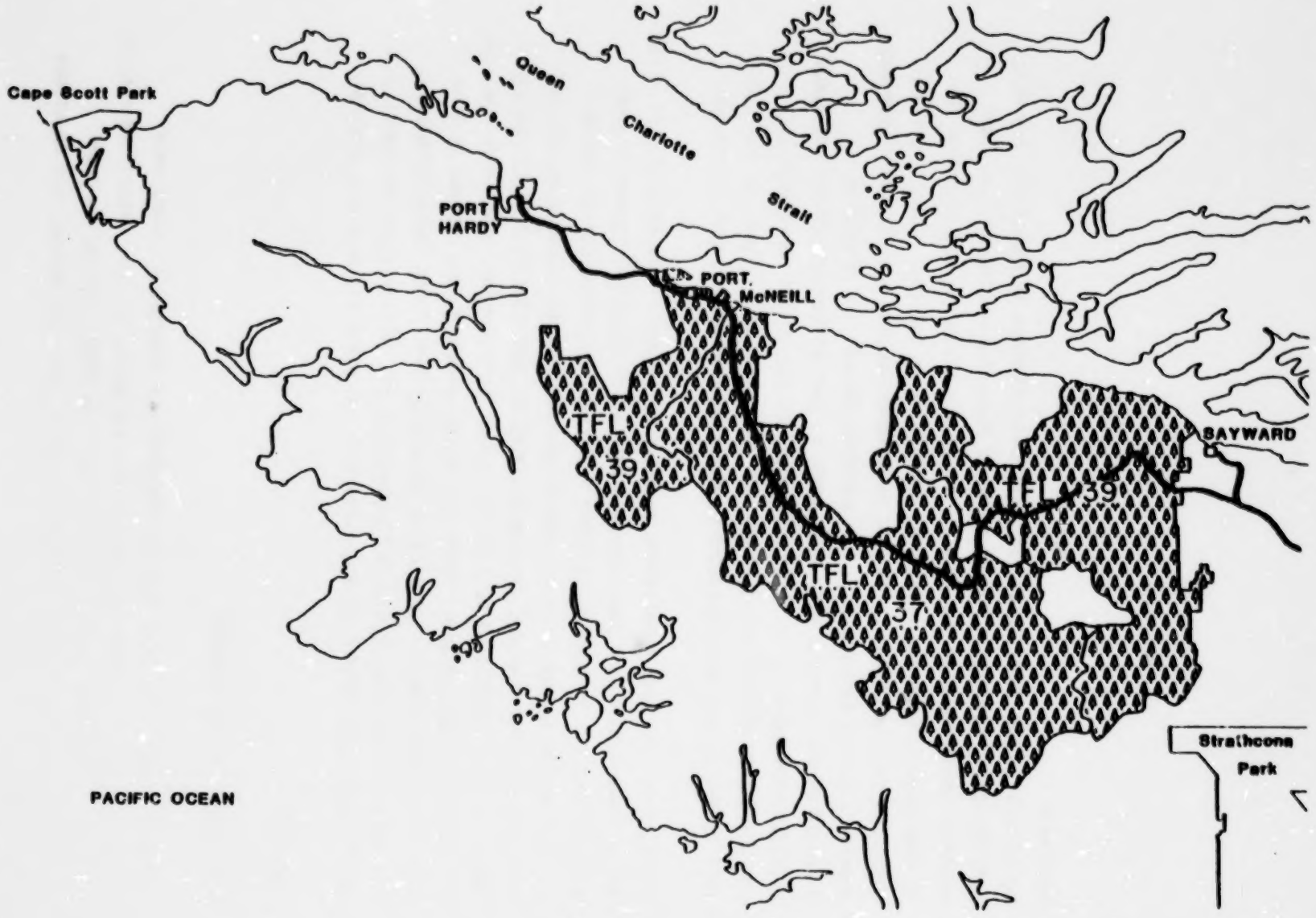
3. to define an orderly procedure which will result in the formulation of several management options for presentation to government.

This analysis will not address the basic research aspects of the ungulate/forestry problem, but rather it will attempt to clearly delineate a series of allocation options derived from existing data.

THE AREA

Because of the recent submission of the Management and Working Plans for TFLs 37 and 39, these areas have become the immediate focus of the timber/wildlife problem. These two TFLs are representative of lands with high wildlife capabilities in the snow belt area of northern Vancouver Island. For these reasons, the analysis will be restricted to these two TFLs, although it is acknowledged that allocation problems exist elsewhere on the Island. Useful concepts and solutions related to the problems of allocation could conceivably be applied elsewhere if, as a result of this analysis, they can be successfully demonstrated in TFLs 37 and 39.

The Nimpkish Tree Farm Licence (TFL 37) is held by Canadian Forest Products and is located south of Port McNeill and north of Gold River. The boundary is shown on the attached map, and the total area is 186,000 hectares of which 128,000 hectares is productive forest land. The area is dominated by the Coastal Western Hemlock Zone which consists largely of Western hemlock and balsam fir with Douglas fir at lower elevations.


Cape Scott Park
Queen
Charlotte
Strait
PORT
HARDY
PORT
McNEILL
TFL
39
TFL 39
TFL
37
BAYWARD
Strathcona
Park
PACIFIC OCEAN

TFL 39 or Haida Tree Farm Licence is held by MacMillan Bloedel and comprises blocks on Vancouver Island, the mainland, the coast islands and Queen Charlotte Island. Block II (Adam River) and Block IV (Port Hardy), consist of 181,000 hectares of which 138,000 hectares are productive forest land.

THE NATURE OF THE PROBLEM

Wildlife

Cold, snowy winters provide great hardship for Blacktail deer and Roosevelt elk because deep snow limits their movements and restricts the availability of understory food plants. Snow tends to be shallower under dense canopies of old trees than in the open, since the canopy breaks up the pattern of snow pack. Lichens, occurring only on old trees, are important deer foods when the snow is deep; branches and lichens are also an important part of litter fall. The uneven age structure of old growth stands provides a mosaic of openings, food sources and shelter not typical of younger or second-growth stands. Where these stands have been severely reduced on Vancouver Island, extreme die-offs of deer were experienced in critical winters, such as that of 1968-69.

TFLs 37 and 39 are representative of the high capability lands on northern Vancouver Island which are critical for the production of deer and elk. In wildlife management plans being developed for the Island, this area is intended to contribute a high percentage of the management targets for these species. On the southern half of Vancouver Island, the production of ungulates is limited due to lack of management control over private lands and in some areas to the low biological capability of the land itself. Current ungulate populations in the TFLs 37 and 39 are depressed greatly below the high levels of the 1950's and 60's due to intensive predation by wolves. While this factor complicates the old growth/ungulate relationship, the wolf population

could be controlled using existing management techniques, although it is recognized there are valid social and emotional considerations in any such decision.

The Forest Industry

These winter ranges contain high quality timber, which is an important component of the forest inventory used in determining the allowable annual cut. In addition, most winter ranges extend down into low elevations and can be logged during the late fall, winter and early spring. There is a shortage of timber available for winter logging. Complete prohibitation of logging in the winter ranges or extended rotation periods will reduce long-term timber yields and affect employment and Crown revenues.

Prior to 1917 small amounts of logging took place around the coastal shores but since then, there have been continuous operations on northern Vancouver Island. Around the turn of the century companies were given rights to harvest timber as an incentive to develop processing plants. These old tenures have remained in force and under current legislation were redesignated as Timber Licences. These areas were incorporated into the Tree Farm Licence areas in 1961. The latter agreements gave the companies shared management rights with the government over timber from both private and Crown land. These agreements ensure the companies can obtain a reasonable timber supply for their mills and that the areas are managed to produce a continuous crop of timber. These contracts constrain the level of wild life management, because according to the Forest Act, the government would have to compensate the companies for a major reduction in their level of harvest.

In summary, given current commitments and harvest rates in TFLs 37 and 39, and subsequent loss of winter ranges, a severe winter could result in a drastic reduction of the natural population levels of deer and elk. A reduction in the harvest level of timber would result in loss of employment for Vancouver Island residents and a decrease in the timber supply to the manufacturing plants owned by the companies.

Determination of Management Options

In order to arrive at the best set of allocation options, it is necessary to set out a clearly defined deductive process in which each step will contribute logically to the next. In addition, the following assumptions will be accepted:

1. Old growth timber is a necessity for the overwinter survival of deer and elk in critical snow years, although the latter species can endure greater snow depths than the former.

2. The old growth timber is contained within historic forest tenures which have specific legal and compensation implications if any modification is proposed.

3. The analysis will be concerned primarily with ungulate populations, not with all wildlife species. Where feasible, benefits to other wildlife will be identified where they can be easily related to old growth and winter range conditions.

4. The analysis will utilize only existing data - it is an interpretive exercise and is not intended to include a research component.

5. The analysis will be concerned with timber production and ungulate population targets for TFL 37 and the Vancouver Island blocks of TFL 39. It will not deal with production targets for individual specific areas within these TFLs.

6. Climatic trends of the last four decades will continue to the end of the century.

7. It is possible to control predation by wolves using existing management techniques.

Using the above assumptions, the following investigative process will be used to determine allocation options on each separate TFL:

1. Determine the ecological considerations for timber and wildlife management.

   A. Timber
      a. The area and volume of the old growth timber
      b. The rate of harvest that could be maintained
   B. Ungulates
      a. The traditional populations of deer and elk
      b. The existing populations
      c. The harvesting pressure or rate of harvest that could be sustained.
   C. Interactions
      a. The impact of the rate of harvest on ungulate populations
      b. The impact of wolf predation
      c. The probability of a critical winter based on snow records

2. Prescribe a series of management options similar to those suggested below:

   1. Timber harvest with no restrictions on harvesting old growth - minimal deer elk production.
   2. Existing level of timber harvest - low level of deer, elk production.
   3. Reduced timber harvest with reserves and scheduling of harvest in winter ranges - increased deer, elk production.
   4. No further timber harvest in important winter ranges - maximum deer, elk production.

   For each of these scenarios, the following factors will be identified:

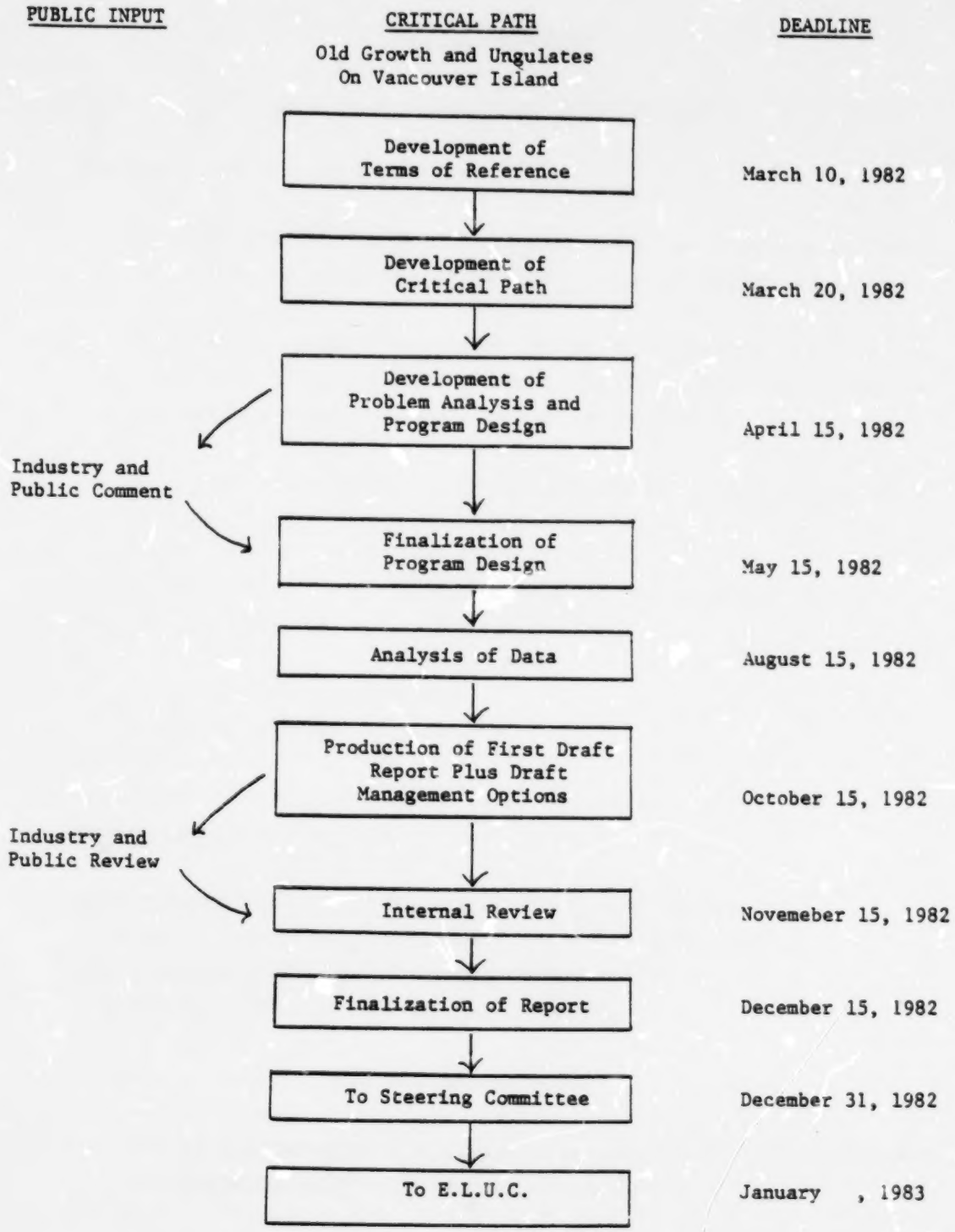
   (a) the value of the timber and wildlife produced.
   (b) the implications of any reduction in meeting the demand and management objectives for both forest companies and the management agencies.

(c) the economic and social costs directly attributable to reductions in timber or wildlife.

(d) the other alternatives, if any, which could be utilized in meeting or modifying the demand for both resources.

The report outlining the options identified will be completed by December 15, 1982 and presented to the Environment and Land Use Committee shortly thereafter.

Public comment and opinion will be actively solicited at key points throughout the analysis, as recommended in the attached Critical Path.


PUBLIC INPUT
CRITICAL PATH
Old Growth and Ungulates On Vancouver Island
DEADLINE
Development of Terms of Reference
March 10, 1982
Development of Critical Path
March 20, 1982
Development of Problem Analysis and Program Design
April 15, 1982
Industry and Public Comment
Finalization of Program Design
May 15, 1982
Analysis of Data
August 15, 1982
Production of First Draft Report Plus Draft Management Options
October 15, 1982
Industry and Public Review
Internal Review
Novemeber 15, 1982
Finalization of Report
December 15, 1982
To Steering Committee
December 31, 1982
To E.L.U.C.
January , 1983

Terms of Reference

Old Growth and Ungulates on Vancouver Island

1. The objectives of this program are:

   (a) to assess the importance of old growth timber as it relates to forest harvesting and wildlife in Tree Farm Licences 37 and 39.

   (b) to develop a range of production options for timber and wildlife, and an estimate of the benefits and costs associated with each, utilizing both detailed technical analysis and public input.

   (c) to present these options to the Environment and Land Use Committee for its decision.

2. Overall responsibility for policy direction of the program is vested in the Steering Committee, consisting of:

   W. Young, Ministry of Forests
   A. Murray, Ministry of Environment

3. Responsibility for implementation of the program will reside with the Working Committee, consisting of:

   Wayne Swanson, Ministry of Forests, Victoria (Co-Chairman)
   James Walker, Ministry of Environment, Victoria (Co-Chairman)
   Gary Sutherland, Ministry of Forests, Vancouver
   Doug Morrison, Ministry of Environment, Nanaimo

4. The Working Committee will be responsible for:

   (a) the overall technical direction and implementation of the program and its completion within the deadlines established.

(b) the development of a Critical Path for the program consisting of:

(1) breakdown of the program into component parts and the scheduling of program components to December 31, 1982.

(2) Assigning agency responsibility for technical analysis, report writing, review and publication.

(3) identification of the method, extend and scheduling of public involvement.

(4) scheduling and circulation of any reports.

(c) the development of a Problem Analysis by April 15, 1982, consisting of:

(1) a physical description of the area covered by the program.

(2) a short description of the ecological factors affecting deer and elk production.

(3) a short description of the economic and ecological factors affecting timber yields and rates of harvest.

(4) identification of the social, economic and resource allocation problems arising from the interaction of the two resources.

(5) an outline of the type of assessment and review to be undertaken during 1982 to address these problems and to produce the range of management options for decision making.

(d) review and evaluation of any technical aspects of the program, including responsibility for the accuracy of any data or data interpretation.

(e) administration and supervision of any manpower or budgets associated with the program.

(f) reporting to the Steering Committee as requested regarding the status of the program.

(g) maintaining an effective and on-going liaison with the forest industry, environmental groups and the general public on all aspects of the program.

(h) jointly developing all media releases associated with the program.

5. By December 15, 1982, the Working Committee will submit a final report to the Steering Committee.

6. Any disputes which cannot be resolved within the Working Committee will be elevated to the Steering Committee for their decision.

7. The Working Committee will in no way function in the discussion, adjudication or resolution of on-going forestry or wildlife management problems. Such issues are solely the responsibility of the field staff of the two agencies.